Presentation on the Occasion of Receiving the ADHO Antonio Zampolli Prize on Behalf of the TEI Community

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Part One: Context and Rationale

- How was the TEI started?
- Why was the TEI started?
- What problems was it trying to solve?

Humanities Computing in the Mid-80s

- Vocabulary, authorship, stylistic studies
  - Concordance-based:
    - Words, word patterns, combinations
  - Basic statistics:
    - Sorted frequencies of letters, words, phrases
    - Type-token statistics
    - Ranking collocates by strength of association
    - Vocabulary distributions over a text
    - Etc.

Software

- Concordancing, frequency lists, etc.
  - Oxford Concordance Program (and MicroOCP)
  - University of Toronto’s Text Analysis Computing Tools (TACT)
  - WordCruncher
  - . . .
- Input formats varied dramatically!
  - Differed from program to program, project to project

Encoding practices

- Scores of schemes developed in 60s, 70s, 80s for
  - Representing special characters
  - Encoding logical divisions of text
  - Representing analytic or interpretive information
  - Reducing text critical apparatus to a linear sequence

The Problem

- Substantial editing required to use a text encoded for one program or purpose with another
    - . . . if even possible
- It was a mess!
    - Or, as one attendee at the Poughkeepsie meeting in 1987 put it, “chaos”

Examples

- Citation formats
  - Include an abbreviated form of a citation reference at the beginning of each line

```
VirAen01001arma virumque cano, Troiae qui primus ab oris
```

- COCOA format
  - Enclose references in angle brackets, embed in text

```
<W Shakespeare>
<T Merchant of Venice>
<A 2>
<S 6>
<C Graziano>
This is the penthouse under which Lorenzo
. . .
```

W = writer
T = title
A = act
S = scene
C = speaker
L = line number (or program can count if true to text)

Heavily influenced by hardware and software restrictions of the time

Early Attempts

- 1967
  - Martin Kay argues for a “standard code in which any text received from an outside source can be assumed to be”
- 1970s and early 80s
  - Discussion of a standard at various meetings of humanities scholars (San Diego 1977, Pisa 1980)
  - No consensus on how, or even whether, a standard should be developed

1986-7

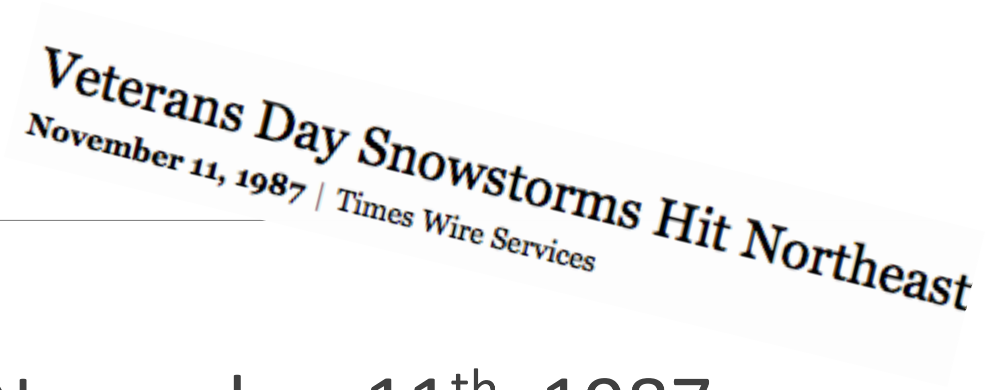
- Still plenty of discussion of need for a standard
- 1987 ICCH conference
  - Nancy Ide and Michael Sperberg-McQueen convince U.S. National Endowment for the Humanities representative **Helen Aguerra** to fund a workshop organized by the **Association for Computers and the Humanities (ACH)**, to bring together the relevant people to determine how and if such a standard would be possible

The Rest is History

- November 11-12, 1987: NEH Workshop at Vassar (Poughkeepsie)
  - Thirty-two people from around the world attended
    - Representatives of text archives, humanities computing centers, professional organizations
      - Organizations: ACH, ALLC originally
      - Antonio Zampolli involved Don Walker of the Association for Computational Linguistics (ACL)

THE HILLARD ROOM
NO SMOKING

Glitch in the Plan



Veterans Day Snowstorms Hit Northeast

November 11, 1987 | Times Wire Services

- Snowstorm in NY on November 11th, 1987
  - Travel from NY airports to Poughkeepsie very tricky!
  - Zampolli convinced a van driver to bring a group of participants stranded at JFK Airport to Poughkeepsie, despite the snow

The Workshop

- Two days of intense discussion led to agreement on
  - Need for common practice
  - Set of basic principles to guide the development of guidelines for encoding and exchange of literary and linguistic data

The “Poughkeepsie Principles”

Motivating Background (1)

- **Hardware constraints** had a huge impact on encoding choices
- **Existing software could be difficult** for the non-computer scientist to install and use
- Accompanying **documentation and metadata hard to specify** in a readily available, consistent way
- Notion of **separating prescriptive markup (how it looks) from descriptive markup (what it is)** was brand new (1986)
- Specter of the argument that it would be **impossible to define a single standard** that suits everyone

Resulting Principles

- Provide **descriptive** rather than **prescriptive** markup
- Provide means for **in-document metadata**
- Focus on **representing the required/desired information**, not on software requirements
- Define a scheme that is **hardware-, software-, and application independent**

Resulting Principles

The scheme should

- Be **simple, clear, and concrete**
- Be **easy for researchers to use** without special-purpose software

But at the same time:

- Allow for the **rigorous definition** and **efficient processing** of texts

Motivating Background (2)

The Poughkeepsie Principles everywhere reflect concern of archive representatives:

- **Requirement for retrospective conversion** of existing encoded texts
- **Loss of investment** in local expertise, software, and systems

Resulting Principle

The guidelines are intended to **suggest** principles for the encoding of texts in the format

Guidelines, not a standard!

Resulting Principle

The guidelines are intended to provide a standard format for **data interchange** in humanities research

- No requirement for conformance locally
- TEI scheme will serve as a “pivot” format
  - Only transduction of local format to and from TEI scheme (vs. *n*-way transduction among schemes)

Resulting Principle

The guidelines should define a **recommended** syntax for the format

- No final decision in Poughkeepsie on the exact syntax
  - SGML was promoted by many, but not unanimously accepted

Resulting Principle

The guidelines should include a **minimal** set of conventions for encoding new texts in the format

- **No requirements** will be made for the addition of information not already coded in the texts
- Newly-encoded texts should include **descriptive and bibliographic information**, and **information about the encoding itself**
- A **recommendation**
- Include means to **extend** the scheme

The Single Unfulfilled Principle

- The TEI project originally intended to **define a metalanguage for the description of text-encoding schemes**, and describe the new format and representative existing schemes in that metalanguage
  - Abandoned this goal because
    - Anxiety over translation of existing schemes subsided as TEI took shape
    - SGML gained far wider acceptance after the Vassar meeting
    - Volume of new texts being encoded shifted the balance of concern away from converting legacy data

Other Principles

- **Polytheoricity**
  - Little (or no) unanimity concerning relevant features to encode
  - Balancing act:
    - **Preserve intellectual autonomy** of researchers, but at the same time provide enough guidance to **avoid pointless variations** in encoding
  - Solution:
    - Specific DTD, but also **alternative means to encode the same thing** when felt necessary

Management

- Entrusted to a **Steering Committee** with representatives of three supporting bodies:
  - Association for Computers and the Humanities (ACH),
  - Association for Literary and Linguistic Computing (ALLC)
  - Association for Computational Linguistics (ACL)
  - This group raised over a million dollars in North America and Europe to support the work of TEI
  - Oversaw the development of the TEI Guidelines until 1996

Why Success This Time?

- **More known about encoding problems** and basic principles than in the past
- Included a **more robust representation** of key organizations and active research centers
- Recent **development of SGML** provided the right tool for a simple, flexible, and extensible encoding scheme

Reflection

- The size, scope, and influence of the TEI far exceeded what anyone at the Vassar meeting envisaged
- In retrospect, it is amazing to see how many foundational issues were addressed by the TEI
    - TEI as a “pivot” (interchange) format
    - Problem of polytheoreticity
    - Adherence to existing standards where possible
    - Requirement to include bibliographic information and description of encoding scheme

Many of these issues still operative in efforts to develop text representation standards

(Over to you, Michael)